## LISTING OF CLAIMS

Claim 1 (Previously presented): A double-triggered silicon controlled rectifier (DT_SCR), the DT_SCR formed on a P-type substrate, the DT_SCR comprising:

an N-well in the P-type substrate;

a first $N^+$ diffusion region and a first $P^+$ diffusion region in the P-type substrate for use as a cathode of the DT_SCR;

a second $N^+$ diffusion region and a second $P^+$ diffusion region in the N-well for use as an anode of the DT_SCR, the second $P^+$ diffusion region, the N-well, the P-type substrate and the first $N^+$ diffusion region forming a lateral silicon controlled rectifier (SCR);

a first trigger node in the P-type substrate for accepting a first trigger current; and

a second trigger node in the N-well for an out-flowing second trigger current;

wherein when the first trigger current flows into the DT_SCR through the first trigger node, or when the second trigger current flows out from the DT_SCR through the second trigger node, the lateral SCR is triggered into a latch state.

Claim 2 (Original): The DT_SCR of claim 1 wherein the first trigger node of the DT_SCR is a third $P^+$ diffusion region, the third $P^+$ diffusion region disposed in the P-type substrate between the first $N^+$ diffusion region and the second $P^+$ diffusion region, and the second trigger node is a third $N^+$ diffusion region, the third $N^+$ region disposed in the N-well between the first $N^+$ diffusion region and the second $P^+$ region.

Claim 3 (Withdrawn): The DT_SCR of claim 2 wherein a first shallow trench isolation (STI) structure is formed in the N-well between the third $N^+$ diffusion region and the second $P^+$ diffusion region, and a second shallow trench isolation (STI) structure is formed in the P-type substrate between the third $P^+$ diffusion region and the first $N^+$

diffusion region.

Claim 4 (Withdrawn): The DT_SCR of claim 2 wherein a first gate is formed on the N-well between the third $N^+$ diffusion region and the second $P^+$ diffusion region, and a second gate is formed on the P-type substrate between the third $P^+$ diffusion region and the first $N^+$ diffusion region.

Claim 5 (Withdrawn): The DT_SCR of claim 4 wherein the first gate and the second gate in the DT_SCR are used to reduce a holding voltage of the DT_SCR so as to improve a turn-on speed of the DT_SCR.

Claim 6 (Withdrawn): The DT_SCR of claim 1 wherein the first trigger node of the DT_SCR is a third $P^+$ diffusion region, the third $P^+$ diffusion region disposed in the P-type substrate between the first $N^+$ diffusion region and the second $P^+$ diffusion region, and the second trigger node is a third $N^+$ diffusion region, the third $N^+$ region disposed across the N-well and the P-type substrate to reduce a breakdown voltage of the lateral SCR.

Claim 7 (Withdrawn): The DT_SCR of claim 6 wherein a first shallow trench isolation (STI) structure is formed in the N-well between the third $N^+$ diffusion region and the second $P^+$ diffusion region, and a second shallow trench isolation (STI) structure is formed in the P-type substrate between the third $P^+$ diffusion region and the first $N^+$ diffusion region.

Claim 8(Withdrawn): The DT_SCR of claim 6 wherein a first gate is formed on the N-well between the third $N^+$ diffusion region and the second $P^+$ diffusion region, and a second gate is formed on the P-type substrate between the third $P^+$ diffusion region and the first $N^+$ diffusion region.

Claim 9 (Withdrawn): The DT_SCR of claim 8 wherein the first gate and the second gate are used to reduce a holding voltage of the DT_SCR so as to improve a turn-on speed of the DT_SCR.

Claim 10 (Withdrawn): The DT_SCR of claim 1 wherein the first trigger node of the DT_SCR is a third $P^+$ diffusion region, the third $P^+$ diffusion region disposed across the N-well and the P-type substrate to reduce a breakdown voltage of the lateral SCR, and the second trigger node is a third $N^+$ diffusion region, the third $N^+$ region disposed in the N-well between the first $N^+$ diffusion region and the second $P^+$ diffusion region.

Claim 11 (Withdrawn): The DT_SCR of claim 10 wherein a first shallow trench isolation (STI) structure is formed in the N-well between the third $N^+$ diffusion region and the second $P^+$ diffusion region, and a second shallow trench isolation (STI) structure is formed in the P-type substrate between the third $P^+$ diffusion region and the first $N^+$ diffusion region.

Claim 12 (Withdrawn): The DT_SCR of claim 10 wherein a first gate is formed on the N-well between the third $N^+$ diffusion region and the second $P^+$ diffusion region, and a second gate is formed on the P-type substrate between the third $P^+$ diffusion region and the first $N^+$ diffusion region.

Claim 13 (Withdrawn): The DT_SCR of claim 12 wherein the first gate and the second gate are used to reduce a holding voltage of the DT_SCR so as to improve a turn-on speed of the DT_SCR.

Claim 14 (Withdrawn): The DT_SCR of claim 1 wherein a third shallow trench isolation(STI) is formed between the third $N^+$ diffusion region and the third $P^+$ diffusion

region of the DT-SCR.

Claim 15 (Withdrawn): The DT_SCR of claim 1 wherein a third gate is formed between the third $N^+$ diffusion region and the third $P^+$ diffusion region.

Claim 16 (Withdrawn): A double-triggered silicon controlled rectifier (DT_SCR) for quick substrate-triggering, the DT_SCR formed on a P-type substrate, the DT_SCR comprising:

an N-well in the P-type substrate;

a first $N^+$ diffusion region and a first $P^+$ diffusion region in the P-type substrate for use as a cathode of the DT_SCR;

a second $N^+$ diffusion region and a second $P^+$ diffusion region in the N-well for use as an anode of the DT_SCR, the second $P^+$ diffusion region, the N-well, the P-type substrate and the first $N^+$ diffusion region forming a lateral silicon controlled rectifier (SCR);

a first trigger node for accepting a first trigger current; and

a second trigger node for an out-flowing second trigger current;

wherein when the first trigger current flows into the DT_SCR through the first trigger node, or when the second trigger current flows out from the DT_SCR through the second trigger node, the lateral SCR is triggered into a latch state.

Claim 17 (Withdrawn): The DT_SCR of claim 16 wherein the first trigger node of the DT_SCR is a third $P^+$ diffusion region, the third $P^+$ diffusion region disposed in the N-well between the first $N^+$ diffusion region and the second $P^+$ diffusion region, and the second trigger node is a third $N^+$ diffusion region, the third $N^+$ region disposed in the P-type substrate between the first $N^+$ diffusion region and the second $P^+$ region.

Claim 18 (Withdrawn): The DT_SCR of claim 17 wherein a first shallow trench isolation

(STI) structure is formed in the N-well between the third $P^+$ diffusion region and the second $P^+$ diffusion region, and a second shallow trench isolation (STI) structure is formed in the P-type substrate between the third $N^+$ diffusion region and the first $N^+$ diffusion region.

Claim 19 (Withdrawn): The DT_SCR of claim 17 wherein a first gate is formed on the N-well between the third $P^+$ diffusion region and the second $P^+$ diffusion region, and a second gate is formed on the P-type substrate between the third $N^+$ diffusion region and the first $N^+$ diffusion region.

Claim 20 (Withdrawn): The DT_SCR of claim 19 wherein the first gate and the second gate are used to reduce a holding voltage of the DT_SCR so as to improve a turn-on speed of the DT_SCR.

Claim 21 (Withdrawn): The DT_SCR of claim 16 wherein the first trigger node of the DT_SCR is a third $N^+$ diffusion region, the third $N^+$ diffusion region disposed in the P-type substrate between the first $N^+$ diffusion region and the second $P^+$ diffusion region, and the second trigger node is a third $P^+$ diffusion region, the third $P^+$ region disposed across the N-well and the P-type substrate to reduce a breakdown voltage of the lateral SCR.

Claim 22 (Withdrawn): The DT_SCR of claim 21 wherein a first shallow trench isolation (STI) structure is formed in the N-well between the third $P^+$ diffusion region and the second $P^+$ diffusion region, and a second shallow trench isolation (STI) structure is formed in the P-type substrate between the third $N^+$ diffusion region and the first $N^+$ diffusion region.

Claim 23 (Withdrawn): The DT_SCR of claim 21 wherein a first gate is formed on the

N-well between the third $P^+$ diffusion region and the second $P^+$ diffusion region, and a second gate is formed on the P-type substrate between the third $N^+$ diffusion region and the first $N^+$ diffusion region.

Claim 24 (Withdrawn): The DT_SCR of claim 23 wherein the first gate and the second gate are used to reduce a holding voltage of the DT_SCR so as to improve a turn-on speed of the DT_SCR.

Claim 25 (Withdrawn): The DT_SCR of claim 16 wherein the first trigger node of the DT_SCR is a third $N^+$ diffusion region, the third $N^+$ diffusion region disposed across the N-well and the P-type substrate to reduce a breakdown voltage of the lateral SCR, and the second trigger node is a third $P^+$ diffusion region, the third $P^+$ region disposed in the N-well between the first $N^+$ diffusion region and the second $P^+$ diffusion region.

Claim 26 (Withdrawn): The DT_SCR of claim 25 wherein a first shallow trench isolation (STI) structure is formed in the N-well between the third $P^+$ diffusion region and the second $P^+$ diffusion region, and a second shallow trench isolation (STI) structure is formed in the P-type substrate between the third $N^+$ diffusion region and the first $N^+$ diffusion region.

Claim 27 (Withdrawn): The DT_SCR of claim 25 wherein a first gate is formed on the N-well between the third $P^+$ diffusion region and the second $P^+$ diffusion region, and a second gate is formed on the P-type substrate between the third $N^+$ diffusion region and the first $N^+$ diffusion region.

Claim 28 (Withdrawn): The DT_SCR of claim 27 wherein the first gate and the second gate in the DT_SCR are used to reduce a holding voltage of the DT_SCR so as to improve a turn-on speed of the DT_SCR.

Claim 29 (Withdrawn): The DT_SCR of claim 16 wherein a third shallow trench isolation (STI) structure is formed between the third $N^+$ diffusion region and the third $P^+$ diffusion region.

Claim 30 (Withdrawn): The DT_SCR of claim 16 wherein a third gate is formed between the third $N^+$ diffusion region and the third $P^+$ diffusion region.

Claim 31 (Previously presented): The DT_SCR of claim 1 wherein the first trigger node is spaced apart form the second trigger node.

Claim 32 (Previously presented): The DT_SCR of claim 1 wherein a portion of the P-type substrate is deposited between the first trigger node from the N-Well.

Claim 33 (Previously presented): The DT_SCR of claim 1 wherein a portion of the N-well is deposited between the first trigger node from the second trigger node.